NOTES AND COMMENTS.

Ex-Lieutenant Governor Brockmyer, of St. Louis, wants to send 1,000 mocking birds to Europe to learn the nightingale's song and teach it to their mates here. Well, if he pays the freight, no one will probably object.

In making treaties with China each foreign country has chosen its own name. England is Ying kwo, the flourishing country; France is Fa kwo, the law-abiding country; the United States, Mei kwo, the beautiful country; Germany Je kwo, the virtuous country; Italy I kwo, the country of justice; Japan is Ji kwo, the land of the sun, but she prefers to be called Ji pen, the land of the rising sun.

An American dentist who recently made as careful an inspection of the tooth of Buddha as the attendants would allow, says that the big piece of bone is the tooth of a crocodile, and could never have grown in the mouth of a human being, because of its size. He narrowly escaped with his life in Ceylon, where he was injudicious enough to make this statement publicly.

A celebrated English authority, in a well known work entitled, "Observations on Reversionary Payments," makes the following wonderful calculations: It is well known to what prodigious sums money at compound interest will increase. A penny so improved from the time of our Saviour (that is to say, put out at 5 per cent. compound interest) would by this time have increased to more money than could be contained in 150,000,000 of globes equal to the earth in magnitude, and all solid gold.

According to the figures in the "Blue Book" recently issued, there were, at the end of 1893, in the United Kingdom, 20,646 miles of railway open for traffic, and the companies had an authorized capital of £1,090,898,780, almost twice the amount of the national debt, and the earnings of the roads left a net revenue of 3.60 per cent. on the invested capital, which was $971,323,353. Of the earnings 50.84 per cent. came from freight traffic and 44.46 from the carriage of passengers, who numbered 873,177,052. Of the freight carried 207,836,308 tons were minerals and 85,454,493 tons general merchandise.

"It may almost be claimed," says Professor Warren P. Laird, of the University of Pennsylvania, "that Philadelphia is at once the most curious, the most typical and the most instructive of American cities—curious because of the strange medley of its more pretentious buildings, and their singularly eccentric individualism; typical of American practice in its broadest aspect, because of the absence of restraint and defiance of precedent shown by the great majority of its architects; and instructive, because of its contrast, for no other American city has so wide a field of architectural error to offer in contrast to its works of real merit."

There is another cause for revolution in Russia. This time, the revolt is to be led by women entirely. Not long ago a St. Petersburg journal reported a festival, at which members of the imperial family were present. The reporter evidently understood little about women's fancies, and made the dress of the Czarina, by his description, one long out of fashion. The result was a ukase from the Censor of the Press—one of the most powerful men in Russia—that Russian newspapers in the future must refrain from describing, or attempting to describe, the dresses of Her Majesty. This naturally deprives the Russian woman of an interesting subject for discussion and criticism, and they are extremely angry at the Censor.

The American Agriculturist thinks that a free library and museum or historical bureau in connection there with should be a feature of every rural township in New York and our middle states. The Massachusetts plan of State aid to libraries in poor towns is most commendable. We shall not be content until this plan is adopted in every State, together with adequate provision for better schools. Then with more mails and free delivery, with good roads and electric railways, country life will be the most attractive of any. The tide is certainly tending forward, and the public recognizes as never before the truth of Washington's noble words, "Agriculture is the most ancient, the most useful and the most honorable employment of man."

The financial difficulties in which so many of the European Governments are at present involved are leading to the development of much ingenuity and resourcefulness in raising the necessary "wind," not only at headquarters in the capital, but also in the provinces. Thus from Spain we hear of the keepers of the State Lunatic Asylum at Alicante, having found themselves without funds and unable to secure any remittances from Madrid, starting off with their lunatics on a concert tour, by means of which they were able to keep going the establishment intrusted to their charge. We have heard before of musical at-homes and theatrical entertainments given by the inmates of insane asylums, but never of concert tours undertaken by a large company of idiots, imbeciles and raving maniacs.

The War Department has issued a volume of "news" on organization, armaments and military progress in American and European armies. The war footings are as follows: Austria-Hungary, 1,794,175; Belgium, 140,000; Colombia, 30,000; England (total regulars and volunteers in England and colonies) 662,000; France, 2,850,000 (excluding 350,000 men classed as auxiliaries); Germany, 3,700,000; Italy, 3,155,000; Mexico, 162,000; Russia, 18,074,865; Spain, 400,000; Switzerland, 48,6000. Some idea of the enormous cost of maintaining these great military forces may be gathered from the statements of annual expenditures on their account as follows: Austria-Hungary, $255,234,000; Belgium, $9,346,000; England, $89,000,000; France, $127,000,000; Germany, $113,118,825; Mexico, about $7,500,000; Russia, $186,349,000; Spain, $28,128,000; Switzerland, $10,550,000.

Dr. William Moon, the famous blind philanthropist, who was just died at Brighton, England, lost his sight when he was twenty-one. He at once set about learning the systems of reading for the blind then in vogue; but finding them all imperfect, he invented a new system, which is now widely used in institutions for the blind. The alphabet in his system consists of only nine characters, placed in various positions. They are composed of the simplest geometrical figures. His success in this direction determined him to devote his life to the welfare of the blind. Languages were his special study, so that he might give all nations the advantage of his alphabet. During the fifty-five years of his blindness he adapted his embossed alphabet to 476 languages and dialects, and his books have circulated all over the world. The number of volumes issued in his type up to the close of 1892 was 191,993. He also wrote music for the blind, and drew embossed geographical and astronomical maps, as well as pictures. He established numerous free lending libraries and home teaching societies for the blind.

Statistics show that in 1850 one person out of every 3,442 was a criminal, in 1860 one in 1,647, in 1870 one in 1,174, in 1880 one in 885 and 1890 one in 757. In other words, there are nearly five times as many criminals in proportion to population now as there were forty years ago. To some extent this increase is accounted for by the deportation of criminals from other countries to the United States; but the most plausible explanation, says the Philadelphia Record, lies in the tendency of our population to swarm into the cities and the exceeding badness of our municipal governments. The decrease of crime cannot be accomplished either by more schools, as some reformers propose, or more jails and reformatories, as other sterner philosophers suggest. We have distanced the world in building school houses and jails during the years when crime has made its most disheartening advances. How would it do to seek to arrest crime in its hotbeds by reforming municipal administrations? Until the control of city governments is wrested from the hands of political partisans who have no higher aim than personal emolument crime will continue to be winked at wherever criminals can afford to pay well for immunity.

BIG BUILDINGS.

The Army of Employees Required to Keep Them in Repair.

Of the many large office buildings in New York some thirty-five are "up to date" in every respect and represent the highest development of modern architectural skill, while new tower-like buildings are rearing their heads every month, each surpassing its predecessor in splendor and modern improvemets. Comparatively few people, even among the tenants themselves, have any right sense of the enormous cost and labor devoted to "caretaking" in these structures and supplying the occupants with all the conveniences they enjoy in common.

The highest of these buildings has twenty-six floors on twenty-two stories. It contains enough brick to build 250 ordinary brick houses and sufficient iron to construct twenty-nine miles of railroad. It has more than 140,000 feet of floor space and 1,000,000 feet of woodwork.

Another of these buildings, which covered an area of nearly an acre, contains over 500 rooms and over 1,000 windows, for which three miles of sash chain are required. This is the largest building in existence.

The head janitor here has fifteen assistants to help him keep the structure in order. This is no small undertaking, for, in addition to the regular routine work, a great number of odd jobs requiring attention is sure to crop up every day in the year.

In addition to these men a force of thirty women is required to clean out the offices, sweep the corridors and wash down the stairs daily. They work from 6 until 9 in the morning, and after 6 o'clock in the evening. This cleaning, scrubbing and burnishing runs in regularly appointed grooves, or it would never be ended.

Most large office buildings have a special corps of plumbers, steam fitters, carpenters and painters among their employees. In the building of which I am speaking there are no less than fifty men on the staff of the chief engineer. These include assist engineers, electricians, oilers and coal passers.

Their wages run from $25 a week, the salary of an assistant engineer, to $10 a week, paid to the coal passers. The electricians and oilers receive from $12 to $18 a week each. By a new method the exhaust steam from the engine is used in heating the building.—[Boston Herald.

An Indian Burying-Ground.

On the Thacker farm, a little over a mile north of Wolcott, N. Y., several boys were playing the day before yesterday, when, in digging for a ground-hog, they brought a number of human bones to the surface. This scared them away and they went for help, returning soon afterwards accompanied by A. D. Griswold and Wesley Cole of this place. The digging was continued, and soon an Indian skeleton, surrounded by a number of decaying relics, was uncovered. The body had been buried seated on a flat rock, facing the gorge of Wolcott Creek, a few rods away. The location of the grave was in a narrow hollow. Stones had been piled in a pyramidal form over the corpse and earth heaped on top, leaving a surface nearly level with the knolls on either hand. A French army musket, doubtless a gift from Canada, had been buried with the body, but with the exception of the flintlock, had rusted entirely away. On that lock, however, making clear its origin, was the place of manufacture, Versailles, together with a portion of the date, 171–, and the coat-of-arms of France. Some roughly cut stone beads, the size of a butternut, were also found, besides traces of brass beads eaten up by verdigris. All except the stone ornaments and the lock fell into impalpable dust after exposure to the air. This site is, no doubt, a Cayuga or Seneca burying-ground, and will be carefully explored in the near future.—[Syracuse Standard.

Only one-tenth of the arable land of the Russian Empire is cultivated.

CLEANING PARIS.

How the French Capital's Streets are Kept Clean.

When it is said that the entire pavement surface of Paris is swept clean every morning, and that to accomplish this only 3,200 men are employed at most, and a large proportion of these only for a few hours each day, it hardly needs saying that the work of the street-cleaning service is conducted in a most systematic way. The plan adopted is, however, extremely simple. For purposes of street-cleaning the city has been divided into 150 districts, called "ateliers." Each atelier is presided over by an official known as a "cantonnier," who is held responsible for the proper care of all streets in his territory. Such a force of subordinate employes and such machinery and apparatus are provided as experience has proved necessary. The "cantonniers" and their chief subordinates are salaried officials (at from 100 to 125 francs per month), and give their entire time to the service; the other employes are paid by the hour (strong men receiving 32 to 37 centimes, and "women, children and weak men from 25 to 30 centimes"), and, as a rule, are employed only during the morning hours.

The main body of the work is done by sweeping-machines, each drawn by a single horse, the work of hand-brooms being only supplementary. The order of procedure is practically the same in all parts of city and over all kinds of pavements. Summer and winter the work begins at 4 a. m. In advance goes a watering-machine to settle the dust. This is followed in narrow streets by a single machine, and in wider ones by two or even three machines in succession, the foremost one nearest the centre of the street. Such a cavalcade passing up one side of a street and back the other shifts all the surface garbage of that street into the gutters on either side, while a single man following flushes the gutters, and directs all but the bulkier portions of the garbage into the sewer openings, situated at short intervals between the hydrants.

Such a cavalcade is equivalent to a small army of hand-sweepers, it being estimated that each machine does the work of twelve men—that is to say, of twelve Parisians, each of whom is supposed to sweep 500 square meters in an hour. Each cohort of watering-carts and sweeping-machines has, of course, its definite district to cover, and so accurately are these apportioned that all the different cohorts finish at practically the same time. By about 8.30 the entire city has been swept, and the detritus worn from the pavements by thousands of hoofs and wheels the day and night before is being carried harmlessly on through the great sewers to the Seine, instead of hurtling on every chance gust into the face of the wayfarer, as does the dust of less favored cities.—[Harper's Weekly.

Some Splendid Timber.

The first thing that strikes a visitor to the Northwest is the immensity of the country's resources. Not the variety nor adequacy, but the sheer immensity. Everything is on so prodigiously large a scale. As one man expressed it: "You have to have a big sheet of paper and a long lead pencil to figure on a proposition out here." The timber at the fair suggests a good illustration. Seven million acres of timber in Idaho; 13,000,000 in Montana; 16,000,000 in Oregon; 20,000,000 in Washington, and uncalculated millions in Alaska and the British possessions. Enough to warrant a good exhibit, it is admitted. And such timber! Imagine miles of trees 300 feet high, straight as arrows, branchless for seventy-five feet! Imagine cutting 8,000 to 10,000 feet of lumber from a single one of them!

The finest wood shown is of the Douglas pine, otherwise known as red fir, rather coarse in grain, but exceedingly tough, and capable of bearing almost any strain. Both English and French experts have pronounced it superior to any wood for ship-building, bridges and other strong work. It will bend or twist like iron, but no pressure can break it squarely as other woods break. When it parts it is in long, jagged rents.

Other valuable woods are red cedar, yellow, black and bull pine, hemlock, spruce, oak, maple and ash. The yellow pine is generally utility lumber; red cedar furnishes the best shingles in the world, and the Western spruce is almost as good as oak for finishing purposes. A curly maple which grows in the coast States is exceptionally suited to cabinet work.—[New York Tribune.

Fabulous Treasures.

England's collection of plate for use at state occasions at Windsor castle is something fabulous in value. Its display surprised even Russia's crown prince himself.

It is generally reckoned to be worth about $10,000,000, and it is no unusual thing for a state banquet at the castle to have plate to the value of half a million in the room.

There are two state dinner services, one of gold and one of silver, says the Omaha Bee. The gold service was purchased by George IV., and will dine 120 persons. The plates alone of this service cost over $12,000.

On state occasions there are usually placed on the dining table some very beautiful gold flagons, captured from the Spanish Armada, which are now, of course, of priceless value, while the great silver wine-cooler, made by Rundell & Bride for George IV., and weighing 700 ounces, always adorns one corner of the apartment.

As sideboard ornaments there are pretty trifles in the way of a peacock of precious stones, valued at $250,000, and a tiger's head from India with a solid ingot of gold for its tongue and diamond teeth.

A HORRIBLE COMBINATION.

"What was that horrible noise last night?" asked the new boarder.

"Oh, that!" responded the season boarder, "that was only the stuttering boarder trying to learn the clarionet."—[Indianapolis Journal.

CURES DIPHTHERIA.

DR. ROUX, THE FRENCH SAVANT, TELLS HOW 'TIS DONE.

Serum of the Blood of Horses Has Saved Thousands in France—An Infallible Remedy for the Dread Disease if Taken in Time.

Pupil of Pasteur.

The eyes of all the world are upon Dr. Roux, the physician who has met with such success with his new method for curing diphtheria, and Paris, the city of his labors, is accordingly proud of him. It was not until the recent Congress of Hygiene, held at Budapest, that Dr. Roux gave to the world the results of his experiments in treating that dread disease, and it

DRAWING BLOOD FROM A HORSE.

speaks well for his theories and discoveries that the 2,500 physicians assembled in Budapest from all parts of the world seem to put faith in him.

His dark, serious face lighted up with a winning smile as the correspondent of the New York World saluted him as "the man who is saving 30,000 lives a year in France alone." "Pardon," he said, quickly, "you exaggerate. It is true that diphtheria and croup claim more than 30,000 victims every year in this country. It is also true that out of 118 children whom I have recently treated for one or the other of these terrible maladies I have saved 116. That is, we think, a very pretty reduction of the mortality from the old rates. Yet we are only on the threshold of success. At the Trosseau Hospital, where the mortality among the children used to be 63 per cent., it has been reduced since the introduction of our treatment of diphtheria and croup to 24 per cent. At the Hospital of the Enfants Malades," continued the Doctor, "where I have been experimenting with my discovery for three years, the average mortality has been lowered from 11 to 1 per cent. This is a good confirmation of the value of our remedy.

"My co-workers, MM. Martin and Chaillou, and I maintain, after a series of careful experiments extending through three years, that by the use of the serum separated from the blood of horses which have been previously vaccinated against diphtheria we have succeeded in lowering in such large proportion the mortality of children attacked by diphtheria or croup, that the malady may be considered as conquered. We are beyond peradventure now. But what we wish specially to do is to impress upon the minds of mothers everywhere the need of flying at once to the remedy the moment the diphtheria declares itself.

"This is what should be done," he went on. "When a child complains of a sore throat an examination should be instantly made. If the mucous surface shows little white spots scattered over it a physician should be called without delay. The white spots may be indications of a simple quinzy, or they may be the first symptoms of croup.

"In either case the physician should at once give the child a sub-cutaneous injection of the anti-diphtheritic serum. If the attack is one of quinzy simply, the remedy will do no harm. If it is diphtheria, the serum will infallibly effect a cure."

The correspondent remarked that diphtheria is a disease about which every mother has a different theory.

"There are many vulgar errors concerning it," said the Doctor. "Nine times out of ten diphtheria does not kill, as is generally supposed, by suf-

PREPARING THE SERUM.

focation. The false membranes which develop at the back of the throat rarely cause total obstruction of the respiratory canal, and even if they did, tracheotomy could save the patient. But the diphtheritic microbe, which swarms on these false membranes, secretes a poison that, sooner or later, according to the virulence of the attack, must contaminate the blood. My pupil Yersin and I claim to have been the first to discover this 'toxine,' and to have proved that diphtheria patients die from poisoning.

"Now, the subcutaneous injection of the anti-diphtheritic serum confers immediate immunity, but acts as an antidote only at the end of several hours, so that if the ravages of the 'toxine' are too far advanced (and this is pretty generally the case among poor children here when the family doctor says that the attack has become too serious for him and that the patient must go to the hospital) the remedy is given in vain. Neither must it be supposed that the serum has any power to cure other diseases which the sufferer may have concurrently with diphtheria."

"And how do you obtain the serum?"

"Well, we will now return to our friend the horse. The great number of experiments made in our laboratory showed that of all animals capable of furnishing anti-diphtheritic serum in large quantities the horse was the easiest to vaccinate. He supports the 'toxine' much better than the dog or than ruminating animals. Nothing is easier than to draw from the jugular vein of a horse, as often as one wishes, great quantities of pure blood from which a perfectly limpid serum separates."

"And is the horse sacrificed?"

"Not at all. The operators of the Pasteur Institute have horses from the jugulars of which they have drawn blood more than twenty times, and the vein remains as supple as at the first 'drawing.' The animals used for this purpose are nearly all young horses, sound and with excellent appetites. They are bled once a month, and at each operation a little more than four quarts of blood, capable of furnishing half that quantity of serum, is taken from them."

"Is there any cruelty in the operation?"

"No. The bleeding causes no pain, and the animal is not much enfeebled if the specified quantities are not exceeded."

Dr. Roux is a young man not yet 40 years, but he has long been known for his valuable work in the Pasteur Institute. He has been the assistant of Pasteur for fifteen years. Pasteur himself is only a chemist. When he came to study human diseases with his peculiar methods it was necessary that he should have some trained physician with him. He applied to Velpeau, who was then at the height of his fame and at the head of the faculty of medicine in

INOCULATING AN INFANT.

Paris. That eminent physician chose for him young Dr. Roux, who was but an unknown student.

Fortunately the student was of the stamp of Pasteur himself. He is capable of working twelve or thirteen hours a day, week after week, and he is as curious to know as he is keen in understanding the results of his observations. The discovery of the special poison of the microbe of diphtheria and croup was made by a German professor of Berlin, but he was unable to reduce it to a method of practical vaccination. It is this which has occupied Dr. Roux for the last two years. Out of many hundreds of sick children, he had lost only one-fifth, while the old methods scarcely cured one-half of the cases, and often two-thirds and more died. Considering how many children are brought to the hospital only when the disease is far advanced, he feels warranted in saying that not more than two out of one hundred need die under ordinary circumstances if properly treated.

DR. ROUX.

All last winter his daily visits to the children's hospital were enough to exhaust the strength of one man. But he was often seen in the remote quarters of Paris at the bedside of little ones down with the terrible disease. Sometimes he has passed the whole night watching them. When the poor parents in the morning asked what they could give him, the famous physician darted out of the door and disappeared, as if afraid even of their thanks. This disinterestedness, which he carries to an extraordinary degree, is known to all his associates of the institute.

He is now at the head of the service, but as the institute is always in want of funds, he does not even draw the small salary which is allotted him. His friends say that he belongs to another age, that he knows nothing of money and cares less, and that he has given up his whole existence to serve science and humanity.